

PROJECT DEVELOPMENT WORKSHOP

Project focus areas & target groups

- **Environmental requirements in public procurement processes**

Public purchasing power in the EU amounts to over 200 Billion EURs/ year. Thus public authorities have a powerful roll in steering societies in a more sustainable future. Requisition medicines are subject to annual procurements. By ordering procured medicines, medical services can save considerable sums. As a result of the deregulated pharmacy market the responsibility now lies with the individual client when ordering the requisition. By selecting the contracted drugs the public health care system can save several million every year, maintain high delivery reliability and ensure patient safety and comply with increasing environmental standards.

How can we create sustainable public procurement and sustainable supply chains for pharmaceuticals? Which environmental criteria and social criteria should be used when procuring pharmaceuticals? How to procure pharmaceuticals in a life cycle perspective? How can the new environmental management system 14001 contribute to formulate requirements for different value chains throughout supply chains? How to generate, collect and store relevant environmental data and information on pharmaceuticals for procurers?

Target group: Public procurers responsible for procurement of pharmaceuticals used in public institutions, procurers in (private) hospitals and pharmacies

- **Awareness and behaviour**

The knowledge of occurrence of pharmaceuticals in the Baltic environment, their sources and effects are scattered and difficult to grasp by the general public, health care institutions and other stakeholders.

How to raise awareness on the environmental impact of pharmaceuticals in general and certain substances in particular among potential consumers/ the general public, health professionals and other stakeholders? How to ensure responsible and sustainable use and disposal of pharmaceuticals, e.g. antibiotics and non-prescription drugs? How to handle pharmaceuticals within the waste management chain and what are different solutions for collection schemes? How to raise awareness and improve the prescribing processes, e.g. through innovative IT solutions?

Target groups: environmental NGOs, social and environmental ministries and authorities, health professionals in hospitals and pharmacies, waste management practitioners, environmental business developers, universities with educational programmes for health professionals;

- **Risk mitigation measures related to the use of veterinary pharmaceuticals**

The pathway of veterinary pharmaceuticals to waterways is different from human pharmaceuticals. While human pharmaceuticals discharge into the environment mainly through sewage treatment plants, veterinary pharmaceuticals could enter the environment through e.g. direct application in aquaculture, wash-off from topical treatments, from livestock waste treatment plants and runoff from manure-treated farmlands. Correct use and efficient risk mitigation measures of veterinary pharmaceuticals need the co-operation of different actors, e.g. veterinarians, farmers and/or animal owners.

Target groups: Veterinarians, farmers, animal owners, environmental NGOs, agricultural and environmental ministries & authorities, business developers, agricultural universities

- **Waste Water treatment**

While efforts should be made to limit input of pharmaceuticals to the environment upstream, handling of pharmaceuticals in waste water treatment plants has to continue using sustainable, cost-effective, integrated solutions. Several innovative technologies for waste water treatment have shown good effects in removing pharmaceutical residues in waste water, like active carbon, ozonation, UV treatment or Membrane Bioreactor (MBR). However, there is no one fits all solution.

How can we limit the amount of pharmaceuticals reaching the environment from waste water, domestic and industrial, small to large scale? What can we do further upstream to limit the volume of pharmaceuticals coming into waste water treatment plants? How can we close loops in the waste water treatment process, how to handle residues in sludge while recycling phosphorous and nitrate for agricultural purposes?

Target groups: researchers/ practitioners active in the field of sewage, sludge and water treatment, municipalities and cities, business organization offering systems and products for sludge, sewage and water management, clean tech experts, water conservationists, organizations working with production and preservation of drinking water, storm water management etc.

- **Anti-microbial resistance**

Antibiotic resistance is one of the greatest threats to healthcare worldwide. Bacteria are increasingly developing resistances to antibiotics and as a result, humans and animals are more severely affected by longer lasting infections which may even lead to death. The inappropriate use of antibiotic drugs favours the emergence and selection of resistant strains, and poor infection prevention and control practices contribute to further emergence and spread of antimicrobial resistance. There is a need for interdisciplinary co-operation, awareness raising, incentives and solutions.

How to minimize the development and proliferation of antibiotic resistance? How to ensure more rational use of antibiotic in human and veterinary medicine? How to improve monitoring? How to foster innovation and development of alternative solutions that minimize the use of antibiotics in human and veterinary medicine? How to ensure integrated and coordinated actions between the health and environmental sector?

Target group: health professionals, pharmaceutical business organizations, researchers and practitioners from the agricultural sector/ animal husbandry, ministries of social affairs, ministry of environmental affairs, risk management strategies

- **Monitoring**

Currently, there is no comprehensive overview of the status and pressures of pharmaceuticals in the environment in the Baltic Sea Region. There are no systematic regional studies aimed at identifying sources and pathways in the Region of pharmaceuticals into the environment. The EU Water framework Directive watch list is a mechanism aimed at emerging pollutants for which the available monitoring data are either insufficient or of insufficient quality for the purpose of identifying the risk posed across the EU. Available analytical methods for selection of compounds to this list are a criterion.

How can we harmonize and improve the collection of data and monitoring processes of hazardous substances in general and pharmaceuticals in particular across the Baltic Sea region? What cooperation is needed and how should it be structured? How to improve and harmonize analytical methods? How can we include data on emission from production of pharmaceutical substances in the environmental risk assessment? How can we improve the quality and quantity of data that is used for environmental risk assessments? How can we achieve a more integrated policy science interaction?

Target groups: Environmental protection agencies, environmental monitoring agencies, researchers, industry representatives, business organizations, municipalities and cities